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20554/92

INSTRUCTIONS FOR USE

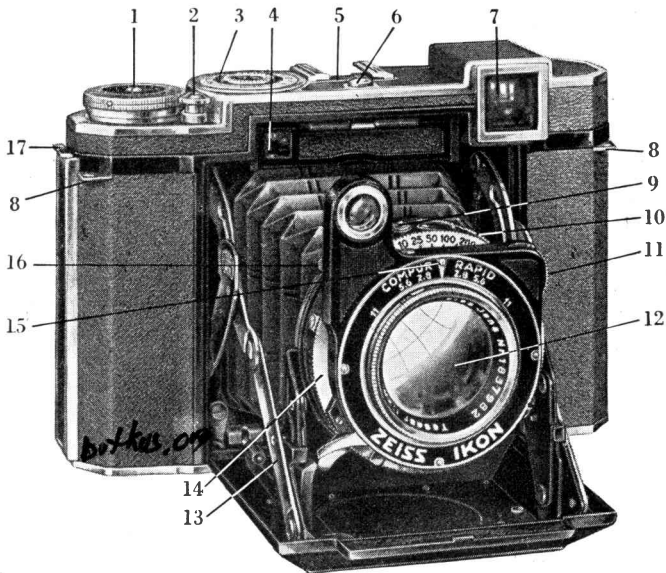
# SUPER IKONTA $2\frac{1}{4} \times 2\frac{1}{4}$ "

WITH DISTANCE METER —  
VIEW FINDER COMBINATION

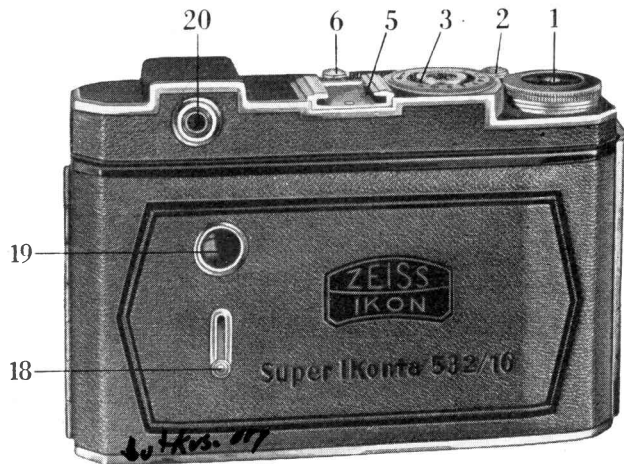
ZEISS IKON AG.  
D R E S D E N

C 2619 E.

1. Film winding key
2. Shutter release knob
3. Picture counter
4. Distance meter
5. Metal shoe for special finders
6. Button for opening camera
7. Window for the view finder — distance meter combination
8. Eyelets for carrying strap
9. Button for delayed action release
10. Diaphragm ring
11. Focussing disc for distance meter and lens
12. Lens



13. Struts holding camera front
14. Exposure scale
15. Indicator for distance scale
16. Shutter tension lever
17. Catch holding camera back in place
18. Slide for covering red observation window
19. Red observation window in camera back
20. Eyepiece of distance meter — view finder combination
21. Diaphragm scale (page 18)



## Introduction

The Super Ikonta  $2\frac{1}{4} \times 2\frac{1}{4}$ " is a roll-film camera which differs from other types of instruments, first in the distance meter, which is coupled to the lens focussing and forms an integral part of the construction, and also in the entirely new design of the front carrying the lens.

The Compur Rapid Shutter is released, not in the customary manner by pressing a lever at the camera front, but by depressing a button on the body while holding the camera in position for exposure.

The camera is arranged to take 11 pictures  $2\frac{1}{4} \times 2\frac{1}{4}$ " in size. The film wind is locked from picture to picture. The number of exposures made can be read off on a film counting disc.

The special construction of the camera renders unintentional double exposures impossible, since the shutter can be released only when the film has been wound on to the next section.

The Super Ikonta is a 100% "self-erecting" camera — that is, the lens springs out at once into its working position when the camera is opened with one hand.

Focussing on objects at short distances is done by turning the setting disc of the distance meter — view finder combination. This adjustment is communicated to the lens. The combination is constructed on an entirely new principle, and is proof against external conditions, vibration, etc. Flatness of the film in the focal plane is ensured by a spring pressure plate in the camera back.

## **Principle of the automatic shutter locking device in conjunction with the film wind**

The Super Ikonta  $2\frac{1}{4} \times 2\frac{1}{4}$ " is provided with an arrangement whereby the film, when wound, stops automatically when in position for the following exposure. This therefore dispenses with the necessity of watching the red observation window or counter disc.

The shutter is at the same time coupled to the film winding mechanism in such a manner that the release knob cannot be actuated unless the film has been moved on to the next picture. This obviates the danger of making double exposures and also of winding on the film, without exposing it.

The particular design of this camera makes it necessary to pay close attention to several points when loading the film.

But it is advisable at first to make oneself familiar with the following manipulations:

**1. With the film locking device out of action**

the film winding key turns independently of the counter disc and shutter and can be rotated at will. The shutter can be set, but not released, when the film locking device is disengaged, and it is only in this position that the film should be loaded in the camera. The procedure to be followed when inserting the film is the same as for any ordinary rollfilm camera (see page 9 et seq.).

**2. With the film locking device in action**

the film winding key can only be turned from one picture to the next, provided that the shutter has been previously set and released. The camera may not be loaded with film in this position. When releasing the shutter for the eleventh picture the locking device becomes disengaged automatically.

**3. Setting the automatic film locking device**

While pressing down the counter disc turn it in the direction of the arrow up to No. 1, when a strong resistance will be felt. The counter disc should then be released.



#### **4. Putting the automatic film locking device out of action**

Turn the film winding key to its limit stop. Then set the shutter, and when releasing it, see that the release knob is held down hard. It will then be possible to move the counter disc, when pressed down, beyond the No.11, thereby disengaging the locking mechanism.

## **I. Loading the Camera with Film**

Roll films of type B2 are used, which are arranged to give 11 exposures  $2\frac{1}{4} \times 2\frac{1}{4}$ ". Although the film spools when unopened are light-proof, the camera should always be loaded and unloaded, and the spools stored away, in subdued light.

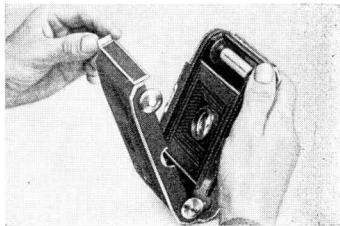
**The film should be inserted in the camera only when the film locking mechanism is disengaged.**

A sign that this is so is when the winding key can be rotated without meeting any stop. (See page 7, section 1). If the locking device is set,

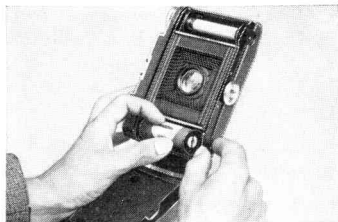
proceed in accordance with the directions given on page 8, section 4, and then, but not before, insert the film in the camera.

The various manipulations should be carried out in the following order:

1. Pull out the catch 17 and swing outwards the hinged camera back.



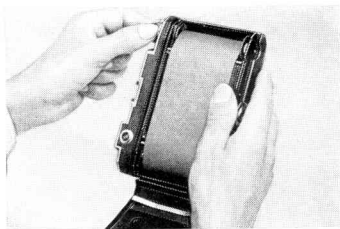
2. Place the full spool in the lower or feed chamber while drawing the spring stud outwards. The tapered end of the paper leader must point towards the upper or take-up spool chamber, which contains an empty spool (the take-up spool) on which the exposed film is wound.



3. Detach the gummed strip which holds the protecting paper in place, and insert the end of the latter in the wide slit of the empty spool.

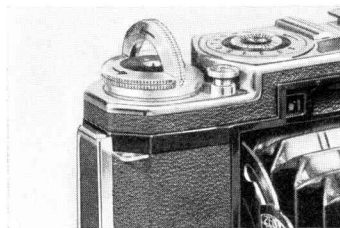


4. By giving a few turns to the winding key 1, in the direction of the arrow, draw the paper taut. In doing this, see that the paper is wound on straight. Any crookedness of the paper band must be put right before proceeding further.

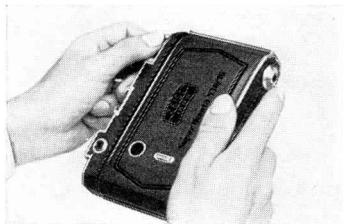


One half of the outer ring on the film winding key 1 is hinged and when lifted in the manner shown in the illustration opposite, affords a convenient grip for winding on the film.

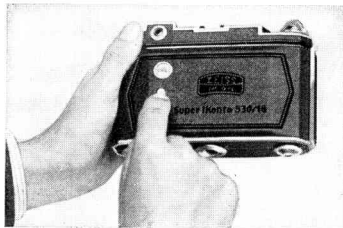
5. Close the back of the camera and lock by means of the catch 17.



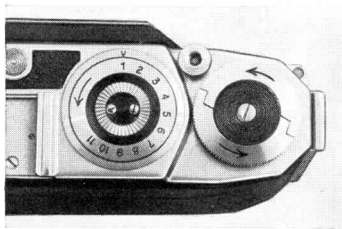
6. Turn the winding key 1 until, first, a hand and then the figure 1 appear in the red observation window 19.



7. Close the window 19 by means of the slide 18.  
(Important when using panchromatic film.)



8. By pressing down the counter disc, turn it in the direction of the arrow to the number 1, when a strong resistance will be felt. Then release the counter disc. The camera is now ready for the first exposure and the automatic locking device is brought into action at the same time. The film wind is arrested from picture to picture by a mechanical arrangement in the interior of the camera. After the 11<sup>th</sup> exposure the mechanism is automatically disengaged, thus allowing the end of the film with its paper trailer to be drawn through. The counter disc only serves to show the number of exposures made. Take care not to turn or press down the counter disc in any way once the camera is loaded with film, as otherwise it may do some harm to the film conveying mechanism.



## **II. Taking out the film**

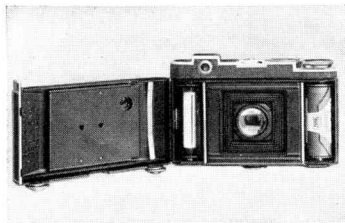
**The film should only be taken out of the camera when the locking device is not working. This is always the case when the entire film has been exposed, for after the eleventh exposure the locking mechanism is put out of action automatically.**

**Should it be found necessary for some reason or other to remove the film before the full number of exposures has been made, turn the film winding key to the next stop and set the shutter. When releasing the shutter keep the release knob pressed down, and at the same time depress the counter disc with the other hand, turning it in the direction of the arrow beyond the number "11".**

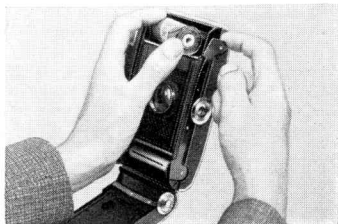
- 1. As soon as the eleventh exposure has been made (the number 11 will then be opposite the indicating mark on the counter disc), wind off the whole length of the film. By looking through the red window it will be seen when the paper is completely wound on to the take-up spool.**
- 2. Pull out the catch 17 and open the camera back.**



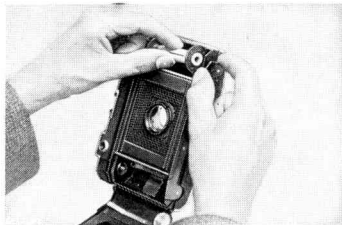
3. Fasten the end of the exposed spool by sticking down the paper with the gummed strip provided.



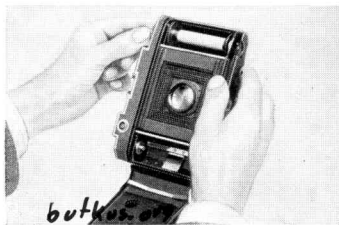
4. Pull back the spring stud and take out the spool.



5. Take the empty spool out of the lower or feed spool chamber and insert it into the upper or take-up one. Both ends of the core of every spool are hollow. Press the end of the spool with the round hole against the spring stud, which should be drawn outwards for the purpose, and allow the end with the slot to fit into the projections of the winding key.



6. Turn the winding key 1 until it snaps with a click into the spool and turns the spool with it.

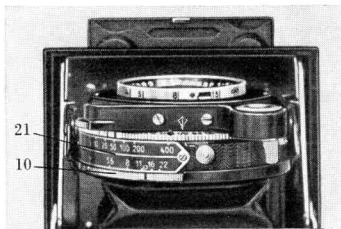
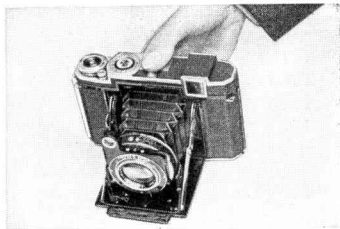


### III. Making the Exposure

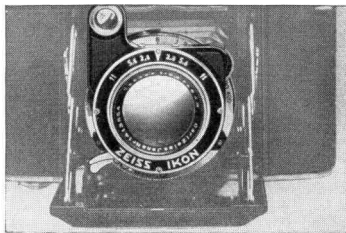
1. Pressure on the knob 6 will cause the camera to spring automatically into working position (the camera should be tilted in a slightly downward direction).

#### Lens Apertures

2. The required aperture of the lens is obtained by setting the indicating mark on the diaphragm ring 10 to the corresponding number on the scale 21. A higher number on the diaphragm ring denotes a smaller aperture, needs a longer exposure time, and increases the depth of focus. The depth of focus for the various stops can be read from the scale on the front plate of the shutter. For fuller particulars, consult



the table on page 31, which serves to indicate the distance and lens aperture to which the camera must be set so as to give the depth of focus for subjects at various distances, e. g. a group of people, the nearest of whom are 10 ft. and the furthest 32 ft. from the camera. In this particular case it will be seen from the table that when focussing on 15 ft. and using  $f/11$



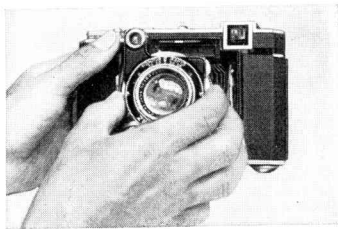
the depth of focus extends from 9'2" to 40' and thus amply suffices for a group arranged between 10 ft. and 32 ft.

**The Compur Rapid Shutter.** The shutter can only function:

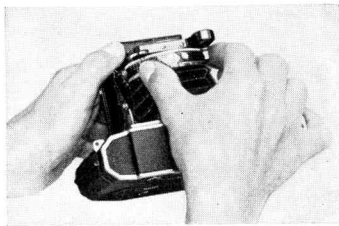
- a) if the shutter is set ready for exposure,
- b) if the film locking device is set,
- c) if the film has been wound on to the next exposure.

Failing the fulfilment of any one of these conditions, the shutter cannot be released. In such cases it is possible to set the shutter, but not to release it.

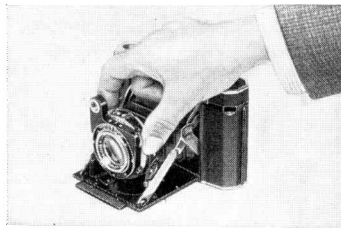
3. Turn the ring 14 until the required speed is brought opposite the mark 15. The numbers on the ring read in fractions of a second. With this shutter it is possible to make "instantaneous" exposures from 1 to  $\frac{1}{400}$  sec.



4. Set the shutter by sliding the lever 16 along in its groove.



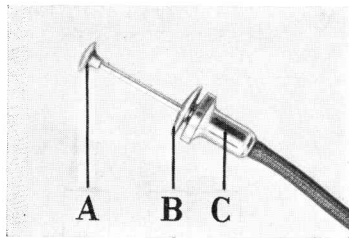
When setting the shutter for an instantaneous exposure, a considerable resistance has to be overcome; this resistance is particularly pronounced with the speed of  $\frac{1}{400}$  sec. To avoid overstraining the shutter mechanism or possibility of damaging the front carrying the lens a counter pressure must be exercised when setting the shutter.



To use the delayed action release for "self-portraiture", set the shutter to the speed required and push back the knob (9), whereupon the lever (16) can be advanced to a second limit stop. The delayed action release cannot be used in conjunction with time exposures or with the top speed of  $\frac{1}{400}$ <sup>th</sup> second.

For short time exposures bring the letter B on the shutter opposite the red mark. The shutter, without having to be set, is opened by a pressure on the release knob (2) and closed again as soon as this pressure ceases. (The tension lever 16 cannot be moved when the ring 14 is set to the letter B). For long time exposures use the special

wire release which is screwed into the bush of the release knob. It differs from the customary type of wire releases by its disc (B), which moves between the button (A) and the tube (C). When the shutter, set to B, is released, it will remain open until the disc (B) is pressed down with the thumb. The special wire release can also be used for short time as well as instantaneous exposures. For this purpose the disc (B) should be pressed down on to the tube (C) and turned slightly to the right, thereby putting the locking device out of use.



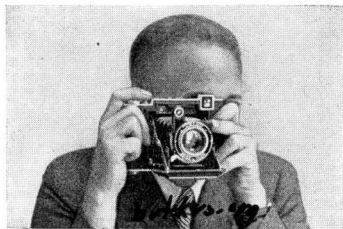
### Releasing the shutter

5. When releasing the shutter by means of the knob 2, see to it that the latter is pressed right down until the shutter operation is completed. If the release knob is not held down for the required length of time, it may become blocked. In this eventuality the knob will

not function again until the film has been wound on, thus causing one picture frame to remain unexposed. When using the delayed action release, the clockwork is first set in motion and after about 12 seconds the shutter makes the exposure in the usual way.

### **Holding the Camera when Taking the Picture**

6. It is impossible to give hard and fast rules for holding the camera. The essential point is that it must be held firmly and without vibration in the hand. A favourite method is to let the camera rest firmly in the palm of the right hand, with the left hand surrounding the camera body. The middle finger of the left hand can thus operate the disc 8 of the distance meter, while the middle finger of the right hand can press the release knob. Take care, however, that the fingers do not obstruct the windows of the distance meter or view finder.





## The Distance Meter — View-Finder Combination

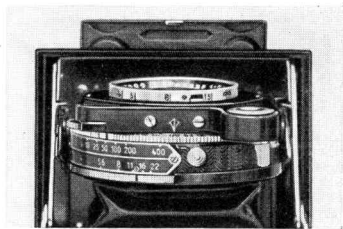
7. Focussing is done exclusively with the distance meter — view-finder combination, which guarantees sharp focus under all circumstances, since the distance meter is coupled to the lens.

By looking through the eyepiece (20) of the distance meter and view-finder, a lighter circular portion of the field in the centre of the picture will be seen to have a lighter shade, in which a double image of the object included in that portion of the field is easily detected. By turning the small wheel (11) one of these images will be seen to move sideways, and when the two images fuse into a single one, the lens is accurately focussed at the distance of the object seen in that portion of the field. It should be noted that this adjustment must be made with the object on which focus is desired in the centre of the lighter rectangular field, and not at the left or right-hand edges.



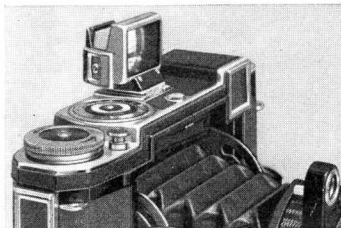
When taking the picture, see that the horizontal and vertical lines of the subject run parallel to the sides of the finder. Tilting the camera either downwards or upwards will make towers, high buildings etc. appear as though they were falling over.

A graduated scale of distances is also engraved on the outside of the lens cell and a mark shows the distance on which the lens is focussed.

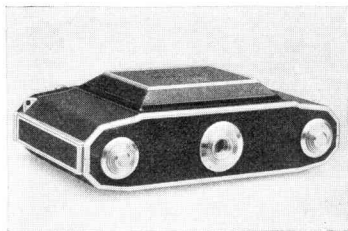


## General

8. Special finders, such as the finder system van Albada are inserted in the metal shoe 5.



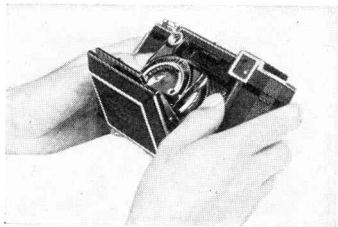
9. The camera has a bush for screwing it to a tripod.



10. After every exposure wind the film on to the next picture. If this is overlooked, the shutter cannot be released. This makes it impossible to make two exposures on one section of the same film.

#### IV. Closing the Camera

The camera is closed by pressing on the short upper arms of the struts and at the same time raising the baseboard.



## Some Hints on Taking Pictures

The large aperture of the Tessar allows of instantaneous exposures up to  $\frac{1}{400}$  sec. in bright light. In dull weather slower shutter speeds must be used. In that case objects in rapid movement should not be taken, especially if they are close to the camera.

When the light is good, the lens can be stopped down to  $f/11$  and at this aperture there is the advantage that when focussing on 24 ft. all objects from infinity to 11'7" are in uniformly sharp focus.

The time of exposure can be ascertained with the aid of exposure tables (Zeiss Ikon exposure table, which briefly covers all kinds of subjects and lighting conditions).

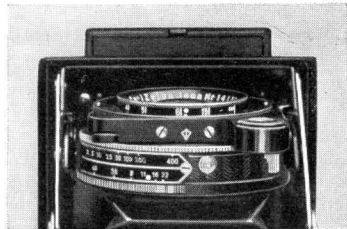
But for determining the time of exposure accurately, it is advisable to use the "Helios" photo-electric exposure meter.



## N.B. Two-point Setting

For the purpose of making the camera ready for use in the minimum of time, the Super Ikonta is also fitted with the popular Zeiss Ikon Two-point Setting.

For this, the stop is set between  $f/8$  and  $f/11$  and the lens focussed on about 26 ft. The shutter should preferably be set to  $\frac{1}{25}$  sec. The exact setting for aperture and distance are marked by red dots. As shown by the table (page 31), a wide range of depth of focus is obtained by setting in this way — sufficient for the great majority of subjects. When using rapid film the above exposure will still suffice on bright sunshiny winter days during the hours from 9 a. m. to 3 p. m.



## Use of Supplementary Lenses

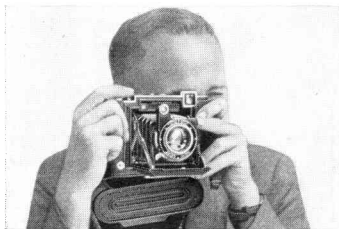
The camera lens will not focus on objects nearer to the camera than 6 ft. A supplementary lens or Proxar lens must be used for these.

The distances for which the different lenses can be used, as well as data regarding the focussing, will be seen from the table at the foot of page 31.

## Ever-ready Case

Needless to say, a valuable camera such as the Super Ikonta should not be exposed to weather etc., but must have the protection of a leather case. The Ever-ready Case is not one of the ordinary kind but is provided with a flap which is readily opened and allows of the exposure being made and of all the required manipulation of the camera without taking the latter out of the case.

The camera is fixed to the Ever-ready case by means of the screw in the interior of the case. It must be screwed into the bush at the bottom of the camera by turning the milled screw-head on the outside of the leather case in a clockwise direction.



# Depth of Focus Table for the lenses of the Super Ikonta $2\frac{1}{4} \times 2\frac{1}{4}$ "

Distances in ft. and inches

Distance	inf.	48'	24'	15'
Diaphragm {	f/2.8	95'-''- inf.	31'9''- 98'	19'1''- 32'3''
	f/4	66'-''- inf.	27'9''- 179'	17'7''- 38'-''
	f/5.6	47'-''- inf.	23'8''- inf.	15'10''- 49'-''
	f/8	33'-''- inf.	19'6''- inf.	13'10''- 90'
	f/11	24'-''- inf.	15'10''- inf.	11'11''- inf.
	f/16	16'5''- inf.	12'3''- inf.	9'9''- inf.
	f/22	12'-''- inf.	9'5''- inf.	7'11''- inf.
<hr/>				
Distance	12'	9'	6'	5'
Diaphragm {	f/2.8	10'7''- 13'9''	8'3''- 10'-''	5'8''- 6'5''
	f/4	10'2''- 14'8''	7'11''- 10'6''	5'6''- 6'7''
	f/5.6	9'6''- 16'2''	7'7''- 11'2''	5'4''- 6'11''
	f/8	8'9''- 19'-''	7'1''- 12'5''	5'1''- 7'4''
	f/11	8'-''- 24'2''	6'6''- 14'6''	4'9''- 8'-''
	f/16	6'11''- 45'	5'10''- 20'-''	4'5''- 9'6''
	f/22	6'-''- inf.	5'2''- 37'	4'-''- 12'1''
<hr/>				
Diaphragm {	f/2.8	10'7''- 13'9''	8'3''- 10'-''	5'8''- 6'5''
	f/4	10'2''- 14'8''	7'11''- 10'6''	5'6''- 6'7''
	f/5.6	9'6''- 16'2''	7'7''- 11'2''	5'4''- 6'11''
	f/8	8'9''- 19'-''	7'1''- 12'5''	5'1''- 7'4''
	f/11	8'-''- 24'2''	6'6''- 14'6''	4'9''- 8'-''
	f/16	6'11''- 45'	5'10''- 20'-''	4'5''- 9'6''
	f/22	6'-''- inf.	5'2''- 37'	4'-''- 12'1''

Focussing the camera lens on

corresp. to the following distances:

for Camera lens + Suppl. lens 995/46)

for Camera lens + Proxar 0.67 $\times$ 37)

for Camera lens + Suppl. lens 995/47

for Camera lens + Proxar 1.25 $\times$ 37

$\infty$	48'	24'	15'	12'	9'	6'
	4'11''	4'5''	4'1 $\frac{1}{2}$ ''	3'9''	3'6 $\frac{3}{4}$ ''	3'3 $\frac{3}{4}$ ''
	2'5 $\frac{1}{2}$ ''	2'4''	2'2 $\frac{3}{4}$ ''	2'1 $\frac{1}{2}$ ''	2'3 $\frac{1}{4}$ ''	1'11 $\frac{1}{2}$ ''
	2'7 $\frac{1}{2}$ ''	2'5 $\frac{1}{2}$ ''	2'4 $\frac{1}{4}$ ''	2'3''	2'2''	2'3 $\frac{1}{4}$ ''
						1'9 $\frac{3}{4}$ ''
						1'10 $\frac{1}{2}$ ''

\* measured from the mount of the supplementary lens.